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The role of effective Factors on Organizational Knowledge Sharing

Dr. Khodayar Abili^a, Fatemeh Narenji Thani^b, Faranak Mokhtarian^{c*}, Mohammad Mehdi Rashidi^d^aAssociate Professor of the University of Tehran- Iran^{bcd}Phd Students of Educational Administration-University of Tehran-Iran

Abstract

Nowadays, most of scholars believe that organizations should pursue effective methods for disseminating and sharing of organizational knowledge among different levels of organization's human resources. Bailey and Clarke (2001) believe that "by implementing knowledge management in organizations, managers are to improve knowledge sharing among people, between people and organization for creating competitive advantages". Therefore, the necessity of identifying and applying effective methods for sharing and transferring internal knowledge of organization and knowledge management has been increasingly revealed. The current research has conducted with the aim of examining effective factors on knowledge sharing in the Institute for International Energy Studies. Based on Lin model(2008), in which three factors of (1) organizational structure (including complexity, officialism, centralization), (2) organizational culture (including bureaucratic, creative, innovative and supportive culture) and (3) interaction among departments, have effect on knowledge sharing. By using of correlation research method, in this study, 50 experts have been selected by purposive sampling. The collected data have been analyzed by using such statistical methods as Spearman Correlation Coefficient, U-man witny, Wilkakson and Freadman. The findings show that 1) the situation of knowledge sharing is rather desirable; 2) age, work experience, field of study, educational level and organizational position don't have effect on knowledge sharing; 3) knowledge sharing has a positive relation with human factors (commitment and trust) and negative relation with structural factors (officialism, centralization and complexity); 4) there is positive relation among knowledge sharing, creative and supportive culture (elements of cultural factors), and negative relation between knowledge sharing and bureaucratic culture (the third element of cultural factors); 5) deterrent factors of knowledge sharing (bureaucratic culture and structural factors) have no meaningful difference in ranks, however in the facilitative factors (human factors (commitment and trust), organizational culture (creative, innovative and supportive culture), the creative and innovative culture has the highest rank and after that, other ranks are related to trust, supportive culture and commitment

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Keywords: Knowledge Sharing; Organizational Structure; Organizational Culture, Interaction

1. Introduction

* Corresponding author. Tel.: +9802188904442; fax: +9888922245.

E-mail address: mokhtarian_fa@yahoo.com.

In today's business environments, perception of knowledge importance as a vital source for organizations is increasing. Contrary to other sources in an organization this source is not being paid as much attention by managers as human resources, financial resources, and etc. In recent years, those organizations that haven't used their knowledge resources have faced serious ventures. Many researchers and scholars believe that knowledge resources should be paid attention and managed by converting tacit knowledge to explicit knowledge (Bhatt, 2001). Knowledge management is known as the process of simplifying, developing, and improving knowledge creation, acquisition, sharing, and dissemination in organization. In other words, identifying the organization's knowledge and using it as a penetrating tool into the business environment help an organization to compete with other organizations (Long, 2001). Knowledge management is the organization's tool for achieving its goals through creating, acquiring, integrating, and sharing information, insight, wisdom, thought, inductions, and the experiences of all members (Gooijer, 2000). Knowledge sharing is the process of transferring explicit knowledge to the other members of the organization (Bartol & Sirvasta, 2002). Employees may panic about losing the ownership of their personal knowledge (Yung, 2008). Wah (2001) claims that one of the important obstacles in implementing knowledge management and knowledge sharing is people's tendency toward storing knowledge, because they think "knowledge is power". Kim & Bock (2002) believe that one of the essential challenges and most difficult part of knowledge management process is making people share what they know. They put forward two reasons for this statement: 1. Knowledge has an adhesive property and is steady in the people's mind, this inheritance leads to slowness, cost, and unreliability of knowledge transfer among people. 2. Knowledge sharing process is composed of knowledge externalization through knowledge resource and internalization of it by its receiver. In this process, people acquire their needed knowledge not only by internal organizational sources, but also use external sources (Liu & Liu, 2008). From economic perspective, knowledge sharing issues are noteworthy. According to this point of view, scarcity of knowledge, determines its financial value. In fact, if people are the owner of rare and critical knowledge, they will receive lots of benefits from the organization. If they share their worthy knowledge, the knowledge advantage and their benefits will be lost, therefore the question is why people must share their especial knowledge with others? Robert (2000) believes that experts must share their knowledge freely. Knowledge sharing could help organization flourish in the future. Scholl (2005) points out that knowledge sharing process should receive more attention. Unless knowledge is shared, organizations might face problems. Knowledge should be disseminated and shared before it gets wasted. Baily & Clark (2008) express that manager's purpose of knowledge management in organizations is to improve knowledge sharing among people, between people and the organization in order to attain competitive- advantages. Effective knowledge sharing among organization's members, especially in research and educational organizations, leads to knowledge production cost reduction and guarantee of sharing work processes in organizations and enabled them to solve their problems. Since most organizations don't have enough experience in knowledge management, managers should be aware of preventive issues and obstacles while they are implementing knowledge management. According to Brink (2001) the main requirements of knowledge sharing are (1) social circumstances, (2) organizational conditions, and (3) technological conditions. Nonaka & Takeuchi (1995) believe that Intention, autonomy, creative chaos, redundancy, and requisite variety are effective organizational requirements of knowledge creation which lead to knowledge sharing in the organization.

In their study, Zhang, Faerman and Cresswell (2006) found that technology, type of knowledge, trust, leadership, motivation, size and diversity of groups, strategy, and information technology are determinant factors of knowledge sharing. Morey et al (2000) consider knowledge sharing as a humanistic manner which is affected by factors such as strategy, structure and roles, processes, organizational culture, physical environment, structures and manuscripts, motivation, and merits. Hooff and Ridder (2004) introduce organizational commitment, communication atmosphere, and virtual communication as effective factors on knowledge sharing. Ling & Hung (2008) consider background factors and personal perception as the most essential effective factor on knowledge sharing. Finally, Lane (2008) introduces a model for knowledge sharing which is used in this study.

2. Research objectives

Main object: Determining the relation of structural, cultural, and human factors with knowledge sharing.

Sub objectives:

Objective 1: Examining the status of knowledge sharing among employees in the organization under study

Objective 2: Evaluating the relation between cultural factors (bureaucratic culture, supportive culture, and creative and innovative culture), structural factors (complexity, centralization, and formality), and human factors (trust, and commitment) with employee knowledge sharing

Objective 3: Ranking facilitating and deterrent factors of knowledge sharing among employees

3. Research Method

This is a survey which describes the phenomenon under study. It is also an applied research which will be conducted quantitatively.

4. Data gathering instrument

The instrument used in study is a questionnaire which was used by Lin (2008) to measure knowledge sharing and its effective factors. Lin formulated this questionnaire based on related viewpoints, including the questions of the structural factors (formality, complexity and centralization) by Robbins (1990) and questions of commitment and trust by Porter (1974) (Lin,2008). This questionnaire contains 34 questions: 1 - 11 on structural factors, 12-17 on human factors, 18-28 on cultural factors and finally, 29- 34 on knowledge sharing. This questionnaire has been designed based on Likert scale. The calculated Cronbach's alpha for determining the reliability of the questionnaire was 0.89.

5. Population

The purposive sample of 50 managers and experts working in the Institute for International Energy Studies was selected.

Following data collection, the following statistical methods were used to analyze data:

1. Descriptive statistics including mean, percentages, and standard deviation for examining the status of knowledge sharing among employees
2. Spearman correlation coefficient for evaluating the relation between structural, cultural, and human factors through knowledge sharing
3. Friedman test for ranking deterrent and facilitating factors of knowledge sharing

6. Research findings

Research findings were examined based on predefined objectives:

Objective 1: Examining the status of knowledge sharing among the considered research organization employees

Table 1: Mean and standard deviation for knowledge sharing and structural, cultural, and human factors

Variable	Count	Mean	Standard deviation	Mean standard error
Knowledge sharing	50	3.56	0.80	0.11
Formality	50	2.49	0.46	0.06
Complexity	50	2.16	0.70	0.09
centralization	50	3.41	0.49	0.07
Commitment	50	3.20	0.70	0.09
Trust	50	3.48	0.62	0.08
Bureaucratic culture	50	2.15	0.62	0.08
Creative and innovative culture	50	4.86	0.62	0.08
Supportive culture	50	3.37	0.31	0.04

Results show that the highest mean relates to creative and innovative culture with a value of 4.86; followed by knowledge sharing with a value of 3.56, trust 3.48, centralization 3.41, and commitment 3.20 respectively. In the meantime bureaucratic culture with a mean of 2.15, complexity 2.16, and formality 2.49 possess least mean value respectively. This clearly shows that knowledge sharing stands higher than average.

Objective 2: Evaluating the relation between cultural factors (bureaucratic culture, supportive culture, and creative and innovative culture), structural factors (complexity, centralization, and formality), and human factors (trust, and commitment) with employee knowledge sharing

Table 6: Results of Spearman correlation coefficient between cultural, human, and structural factors with knowledge sharing

cultural, human, and structural factors with knowledge sharing		Cultural factors	Human factors	Structural factors
Knowledge sharing	R	0.700	0.644	-0.458
	P	0.000	0.003	0.000

Obtained data shows that between knowledge sharing and cultural factors, a positive and significant correlation ($R=0.70$) exists, in the level of Alpha 0.000. In addition, a positive correlation (0.644) exists between human and knowledge sharing factors. This is while structural factors have negative correlation (-0.45) with knowledge sharing.

Objective 3: Ranking facilitating and deterrent factors of knowledge sharing amongst employees

In this research, bureaucratic culture, formality, complexity, and centralization were recognized as deterrent factors, and trust, commitment, creative and innovative culture, and supportive culture were considered as facilitating factors.

Table 9: Significance of knowledge sharing deterrent factor rankings

Count	50
Chi Square	0.39
Degree of freedom	2
Significance level	0.82

Results show no significant difference between different harming factors (bureaucratic culture, formality, complexity, and centralization) and rankings was identical.

Table 10: Significance of knowledge sharing factor rankings

Count	50
Chi Square	31.23
Degree of freedom	4
Significance level of	0.000

Results show no significant difference between facilitating factors (trust, commitment, creative and innovative culture, and supportive culture).

Table 11: Results of knowledge sharing facilitating factor rankings

Variable	Rankings average
Commitment	2.53
Trust	2.93
Creative and innovative culture	4.06
Supportive culture	2.72

The above mentioned information shows that creative and innovative culture possessed the highest rating amongst other factors, followed by trust, supportive culture, and commitment, respectively.

7. Discussion and conclusion

Globalization and technological advancements have changed the market world and made it face some challenges. The capabilities and competencies of organizations are the most essential factors for their salvation and success in facing the challenges of the market world. Adaptation with the current difficulties and changes is a hard work; therefore organizations are suggested to make and develop active strategies that enable them to predict future trends as well as environmental situations and also make continuous changes (Senge, 1994). This study has been designed

to investigate the effective factors on the knowledge sharing. The examination the relationships of structural, cultural and humanness factors with knowledge sharing is the main purpose of this research. The findings indicate that in terms of knowledge sharing, employers are in desirable situation. Furthermore, their demographic characteristics (such as gender, work experience, the level of education and field of education) make no difference in the amount of their knowledge sharing. The correlation coefficient between structural factors with knowledge sharing also shows that by increasing the formality, complexity and centralization, the amount of knowledge sharing decreases among employees, while the positive relation between human factors with knowledge sharing shows that by increasing the trust and commitment between individuals, the amount of knowledge sharing is also increased. The findings also indicate that creative, innovative and supportive culture causes improvement in knowledge sharing, while the bureaucratic culture reduces knowledge sharing among employees. These findings are in line with Lin's (2008) results.

The Freedman results for ranking the facilitative and inhibitor factors show that based on ranking, there is no difference between inhibitor factors, while among facilitative factors, the creative and innovative culture has gained the highest rank for itself and after that, there are trust, supportive culture and commitment.

8. Recommendations

1) As findings indicate, high level of centralization in organizations and the reason for centralization in decision making power are the obstacles for knowledge sharing. Therefore, it is suggested that power to be delegated lower levels in order to reduce centralization. In addition, corporative decision making needs to be practiced for increasing the knowledge sharing among employers.

2) Due to the positive relationship between knowledge sharing and culture, it can be said that culture is the key indicator of knowledge sharing and people have to gain common and unique goal which can only be attained through participative culture. Creation of knowledge culture is a requirement for knowledge sharing. Cultural values which affect knowledge sharing are: trust, creativity, coordination and execution. If an organization is willing to improve these values, it can use knowledge sharing as the positive force for strengthening the organizational performance.

The existing relationship between trust with knowledge sharing shows that it is possible to increase the commitment of employees and managers through equity and fairness; recognizing capabilities; delegating authority; participative management and creation of job security.

Based on the positive relation between knowledge sharing and trust, it is possible to promote trust in an organization by:

- 1- Trust has to be obvious: employees should see that they gain credit for knowledge sharing.
- 2- Trust has to be felt everywhere.
- 3- Trust should start from the top. If managers are trusted, feeling of trust moves downward and will cover the whole organization.

The existence of trust between an organization and its sub-units as well as its members, has a direct effect on the process of communication in the organization. Consequently, it affects the amount of shared knowledge in its units and between units and departments. Furthermore, the results of the various studies indicate that lack of trust among employees is the key obstacle for knowledge sharing.

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